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[Please amend claim 27 as follows:]

28. A data transmission apparatus for synchronizing an audio signal with a video signal, comprising:

an audio generating means for generating an audio frame;

a video generating means for generating a video frame and a plurality of video synchronization signals;

a digital signal processor operable to temporarily store the audio frame, then encode the audio frame in response to a first video synchronization signal;

a host microprocessor operable to send command signals to, and to set the encoding parameters of the digital signal processor application.

[Please amend claim 28 as follows:]

29. A data transmission apparatus for synchronizing an audio signal with a video signal according to claim 28, wherein the digital signal processor must first receive a start command from a host prior to encoding the audio frame.

[Please amend claim 29 as follows:]

30. A data transmission apparatus for synchronizing an audio signal with a video signal according to claim 28, wherein the first video synchronization signal is the next generated

5 video synchronization signal immediately following the transmission of the start command from the host.

al [Please amend claim 30 as follows:]

31. A data transmission apparatus for synchronizing an audio signal with a video signal according to claim 28, wherein the DSP comprises an encoder, a buffer and a controller.

[Please amend claim 31 as follows:]

5 32. A data transmission apparatus for synchronizing an audio signal with a video signal according to claim 31, wherein the encoder includes a number of registers for storing data being processed, an arithmetic and logic unit (ALU) for performing logical (e.g., AND, OR, XOR) operations as well as arithmetic (addition, multiplication, division) operations, and a parallel-connected bit shifting unit for performing bit shifting and masking.

[Please amend claim 32 as follows:]

33. A method of synchronizing a digital audio signal with a corresponding digital video signal according to claim 31, wherein the controller is operable to accept and transfer audio frames and communications from and to the encoder.

al [Please amend claim 33 as follows:]

34. A method of synchronizing a digital audio signal with a corresponding digital video signal according to claim 31, wherein the buffer is operable to store and transfer audio frames.

[Please amend claim 34 as follows:]

35. A data transmission apparatus for synchronizing an audio signal with a video signal according to claim 28, wherein a plurality of video synchronization signals are generated periodically.

[Please amend claim 35 as follows:]

36. A data transmission apparatus for synchronizing an audio signal with a video signal according to claim 28, wherein the digital signal processor transmits the audio frame to the multiplexor upon encoding the audio frame.

[Please amend claim 36 as follows:]

37. A data transmission apparatus for synchronizing an audio signal with a video signal according to claim 28, including a programming interface present between the digital signal processor and the host to facilitate communication of a plurality of commands and status signals.

[Please amend claim 37 as follows:]

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38. A data transmission apparatus for synchronizing an
audio signal with a video signal according to above claim 37,
wherein the status signals include responses from the digital
5 signal processor to host confirming the execution of the host's
instructions.

[Please amend claim 38 as follows:]

39. A data transmission apparatus for synchronizing an
audio signal with a video signal according to the claim 37,
wherein the plurality of commands include communications from the
host to the digital processor authorizing the execution of
5 processing functions, requesting status signals and setting
encoding parameters.

[Please amend claim 39 as follows:]

40. A data transmission apparatus for synchronizing an
audio signal with a video signal according to claim 28, further
comprising a demultiplexor means for separating the audio signal
and the video signal from a multiplexed signal in accordance with
5 a control signal, prior to generation.

21 [Please amend claim 40 as follows:]

41. A data transmission apparatus for synchronizing an
audio signal with a video signal, comprising:

an audio generating means for generating an audio
frame;

5 a video generating means for generating a video frame
and a plurality of video synchronization signals;

a digital signal processor (DSP) operable to count the
number of samples of an audio frame representing a time duration
equal to the difference between a second video synchronization
10 signal and a last encoded sample of the audio frame in response
to receiving a stop command;

a host microprocessor operable to generate and transmit
the start command to the digital signal processor;

15 multiplexor means for combining the encoded audio
signal with the video signal.

[Please amend claim 41 as follows:]

42. A data transmission apparatus for synchronizing an
audio signal with a video signal according to claim 41, wherein
the digital signal processor transmits to the host a value
corresponding to the time required to process the counted audio
5 frames.

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[Please amend claim 42 as follows:]

43. A data transmission apparatus for synchronizing an audio signal with a video signal according to claim 41, wherein the second video synchronization signal is the next generated video synchronization signal immediately following the transmission of the stop command from the host.

[Please amend claim 43 as follows:]

44. A data transmission apparatus for synchronizing an audio signal with a video signal according to claim 41, wherein the DSP comprises an encoder, a buffer and a controller.

[Please amend claim 44 as follows:]

45. A data transmission apparatus for synchronizing an audio signal with a video signal according to claim 44, wherein the encoder includes a number of registers for storing data being processed, an arithmetic and logic unit (ALU) for performing logical (e.g., AND, OR, XOR) operations as well as arithmetic (addition, multiplication, division) operations, and a parallel-connected bit shifting unit for performing bit shifting and masking.

al [Please amend claim 45 as follows:]

46. A method of synchronizing a digital audio signal with a corresponding digital video signal according to claim 44, wherein the controller is operable to accept and transfer audio frames and communications from and to the encoder.

[Please amend claim 46 as follows:]

47. A method of synchronizing a digital audio signal with a corresponding digital video signal according to claim 44, wherein the buffer is operable to store and transfer audio frames.

[Please amend claim 47 as follows:]

48. A data transmission apparatus for synchronizing an audio signal with a video signal according to claim 41, wherein a plurality of video synchronization signals are generated periodically.

Please amend claim 48 as follows:

49. A data transmission apparatus for synchronizing an audio signal with a video signal according to claim 41, wherein the digital signal processor transmits the audio frame to the multiplexor upon encoding the audio frame.